

REMARKS

This communication is being filed in response to the final Office Action having a mailing date of January 25, 2008. For the reasons set forth below, it is respectfully submitted that the cited references (whether singly or in combination) do not meet the limitations in the claims. Accordingly, it is kindly requested that the rejection of the claims be reconsidered and withdrawn.

I. Discussion of the claims and cited references

The final Office Action rejected claims 1-12 and 16-22 under 35 U.S.C. § 103(a) as being unpatentable over Kenny (U.S. Patent Application Publication No. 2004/0036595) in view of Schuermann (EP 0689161) and further in view of Tuttle (U.S. Patent No. 5,613,228). Claims 13-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kenny in view of Schuermann and further in view of Tuttle and further view of Turner (EP 0899677). Claims 33 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kenny in view of Roesner (U.S. Patent No. 5,583,819). These rejections are respectfully traversed.

A. Independent claim 33

Independent claim 33 recites, *inter alia*, “reducing power P_j to a level P_{j+1} , $P_j > P_{j+1}$, for a rest of the first time interval t_j if a number of responded tags is more than some particular number.” As an illustration, there may be a situation in which more tags respond to the power P_j than are capable of being processed by the base station. Therefore, the base station reduces the power being sent so that fewer tags are able to respond, and thus the base station is then able to more suitably process the lesser number of responding tags.

In rejecting claim 33, page 9 of the final Office Action cited Kenny’s paragraph [0021] and asserted that:

“Kenny et al. teaches varying the range of the interrogation signal by varying the power of the interrogating signal (paragraph 021) and reducing

the range automatically reduce the number of tags responding to the interrogation signal.”

This assertion by the final Office Action that Kenny’s paragraph [0021] meets the above-quoted limitations of claim 33 is traversed herein for a number of reasons.

First, while Kenny’s paragraph [0021] states that “one of ordinary skill in the art can choose the range of zone 1 for a particular application by adjusting the power and frequency of the LF carrier signal,” Kenny does not disclose, teach, or suggest the conditions recited in claim 33 for reducing power. That is, claim 33 reduces power if the condition of “if a number of responded tags is more than some particular number” is met, while in comparison Kenny discloses “adjusting the power” in order to “choose the range ... for a particular application.” Stated in another way, Kenny adjusts his power in order to match the desired range of his particular application, rather than changing power in response to the number of responded tags being “more than” some particular number.

Second, Kenny does not disclose reducing his power at all. Indeed, page 5 of the final Office Action admitted that Kenny “is not explicit on teaching the reducing the power P_j ...” Indeed, it appears that Kenny uses a method that increases the range (such as by increasing power or frequency) of his carrier signal, rather than decreasing range by reducing power. For example, paragraphs [0035] – [0037] of Kenny describe sending a low frequency (LF) carrier signal first, and then sending a high frequency (HF) carrier signal “[i]f the base station does not receive a response signal in response to a LF carrier signal,” in order to reach tags that are outside of the range of the LF carrier signal. Thus, Kenny’s change (increase) of range is based on whether a response signal is “not received”, rather than a change (decrease) if “a number of responded tags is more than some particular number” as recited in claim 33.

Third, claim 33 was rejected on the combination of Kenny and Roesner. Kenny does not teach the limitations of claim 33 directed towards “reducing power,” as explained above. Roesner does not cure the deficiencies of Kenny. For example, Roesner was merely cited by the final Office Action for allegedly disclosing “turning off the signal transmitted to the

tag without causing the tag to loose[sic] power ...”, and is silent as to the conditions recited in claim 33 pertaining to reducing power “if a number of responded tags is more than some particular number.” In rejecting claim 33, the final Office Action has not cited any reference other than Roesner (which is deficient) to supply the missing teachings of Kenny.

In view of the arguments above, it is respectfully submitted that claim 33 is allowable.

B. Independent claim 1

Independent claim 1 recites, *inter alia*, “wherein the time interval t_f ends prematurely if none of said at least one tag responds.” Page 4 of the final Office Action admitted that “Kenny and Schuermann are also silent on teaching ending an interval prematurely if none of the tag responds.” To supply the missing teachings of Kenny and Schuermann, the final Office Action cited Tuttle. However, it is respectfully submitted that Tuttle does not cure the deficiencies of these references.

More particularly, the final Office Action has relied on Figure 1 and column 2, lines 28-54 of Tuttle. As clearly shown in the flowchart of Figure 1 of Tuttle, the Tuttle device “waits for a response” at a block 4, and then increases power at a block 6 if there was no response. The issue to be considered herein is then “How long does Tuttle wait for a response before he increases his power?” Column 2, lines 28-54 of Tuttle provide the following discussion:

“The signal is then transmitted using the current transmitter power setting 3. The first time this is done, the minimum power setting is used.

After the signal is sent, the interrogator must wait for a brief period of time 4 for the RFID tag transceiver to respond with a signal of its own.

...

If on the other hand, the RFID tag did not send a response or the interrogator did not receive the response, the interrogator will assume that

the broadcast output power of the last transmitted signal was too weak. The interrogator will then increase the power level setting on its own transmitter 6, change the informational content of the signal to be sent reflecting the increase in power 2, and send another signal 3...”

From the above-quoted passages of Tuttle, it is abundantly clear that the Tuttle base station “must wait” for a brief period of time 4 for the RFID tag transceiver to respond. Tuttle’s explicit allocation of a “brief period of time” in which the base station “must wait” strongly indicates that this waiting period of time is fixed and remains fixed—and consequently Tuttle teaches a waiting period that does not end prematurely. Indeed, there is nothing disclosed, taught, or suggested in Tuttle that this period of time to wait for a tag response is a variable amount of time, and the final Office Action has not identified any variability (e.g., premature ending) of Tuttle’s waiting period.

Accordingly, it is respectfully submitted that claim 1 is allowable.

C. Independent claims 12, 18-19, and 21

Independent claims 12, 18-19, and 21 recite, *inter alia* and using varying language, the “prematurely end[ing]” feature. By way of analogy with respect to the arguments presented above, claims 12, 18-19, and 21 are also allowable.

D. Dependent claims 28-32 and 34

Dependent claims 28-32 and 34 recite that the first and second frequencies are “different frequencies in a same frequency band.” In continuing to reject these claims, the final Office Action has again relied upon paragraph [0021] of Kenny that describes “adjusting the power and frequency of the carrier signal.” Pages 2-3 of the final Office Action asserted the following:

“Kenny et al. teaches varying the range of the LF carrier signal by adjusting the power and frequency of the LF carrier signal used to identify objects in a particular zone and teaches the range of the LF signal is greater than 30 kHz and less than 15 MHz (paragraph 021). Kenny therefore teaches the first and second frequencies are in the same frequency band because only LF carrier signal is used to identify objects in zone 1.”

It is respectfully submitted that the final Office Action has misinterpreted the teachings of Kenny in rejecting claims 28-32 and 34. In Kenny, the particular frequency of the LF carrier signal is fixed *a priori* depending on the application and remains fixed during the application. For example, paragraph [0021] of Kenny describes an application where the desired range of the LF carrier signal is about 3 feet, and paragraph [0026] of Kenny describes another (different) application where the desired range approximates the dimensions of a room. Kenny does not change the frequency of his LF carrier signal within a given application (e.g., does not change the frequency of the LF carrier signal while trying to read tags within 3 feet).

Rather, it is respectfully submitted that Kenny’s change of LF frequencies is only performed when he has to change his application (“choose the range of zone 1 for a particular application by adjusting the power and frequency of the LF carrier signal” as explained in his paragraph [0021]). In present claims 28-32 and 34 (which contain the recitations of their respective base claims), the different frequencies in the same frequency band are described in terms of being sent in time intervals—not in terms of different applications as in Kenny.

Accordingly, claims 28-32 and 34 are allowable.

II. Conclusion

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable.
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
SEED Intellectual Property Law Group PLLC

/Dennis M. de Guzman/

Dennis M. de Guzman
Registration No. 41,702

DMD:wt

701 Fifth Avenue, Suite 5400
Seattle, Washington 98104
Phone: (206) 622-4900
Fax: (206) 682-6031

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